9/840,655 – 4/23/01

Results of Search in 1976 to present db for:
(((SPEC/rule AND ACLM/metadata) AND (SPEC/contract OR SPEC/agree)) AND SPEC/XML): 3 patents.

1 6,640,145 Media recording device with packet data interface

2 6,591,272 Method and apparatus to make and transmit objects from a database on a server computer to a client computer

3 5,970,490 Integration platform for heterogeneous databases

6640145

4. The intelligent media device according to claim 1, wherein said digital memory stores ***metadata*** relating to said received audio and/or video data.
19. The intelligent media device according to claim 1,

wherein:

said packet data communications interface communicates with a local area network to at least one external machine and communicates with a remote human user in a manner suitable for use with a browser, to provide instructions for said intelligent server, said local area network optionally including a wireless communications link;

the at least one external machine comprising one or more selected from the group consisting of a telephony system, an imaging system, a videoconferencing system, a consumer electronic device, a security system, an alarm system, an environmental control system, an automobile; an illumination system, a domestic appliance; a pump, and a flow control;

said digital memory further storing ***metadata*** relating to said received audio and/or video data;

said intelligent server having one or more characteristics selected from the following:

being adaptive to at least one of a human user and/and an external machine,

having a mode of operation for acting autonomously based on an inferred program,

having a mode of operation for receiving feedback from a human user;

being adapted to analyze communications received from a human user for likely error,

being adapted to translate a native external machine interface for presentation to the human user, and

being adapted to receive and execute general purpose computer instructions,

further comprising a digital rights manager for enforcing a set of externally supplied restrictions associated with said received audio and/or video data, and a cryptographic processor for selectively cryptoprocessing audio and/or video data in dependence on said rights manager.

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(3. A method of communicating elements of a database, having a ***metadata,*** between a server computer and a client computer, comprising:

generating a pseudo-object by said server computer, said pseudo-object comprising data of said elements;

generating ***metadata*** of said elements, wherein said ***metadata*** is relationship of said data of said elements, wherein said generating step further comprising:

reading said ***metadata*** of said database;

translating a list of said ***metadata*** to a standardized view of said database;

accessing skeleton code templates representative of final classes to be produced;

generating source code for the classes of the objects desired, and scripts to compile said classes into executable form;

producing said object desired by enveloping said data and ***metadata***;

transmitting said pseudo-object and ***metadata*** from said server computer to said client computer; and

assembling said elements to final distributed objects by said client computer from said pseudo-object and ***metadata*** received.

4. The method of claim 3 wherein said reading step further comprises:

generating a pick list based upon an inversion of said database table; and

generating a script containing all unique foreign language strings to be translated.

5. The method of claim 4 wherein said assembling step further comprises:

translating said script to a given language.

6. An article of manufacture comprising:

a computer usable medium having computer readable program code embodied therein configured to translate ***metadata*** of a database into objects desired, the computer readable program code in said article of manufacture comprising:

computer readable program code configured to cause a computer to read said ***metadata*** of said database to determine characteristics of said database and their relationship; wherein said computer readable program code further comprises;

computer readable program code configured to generate a pick list based upon an inversion of elements of said database; and

computer readable program code configured to generate a script containing all unique foreign language strings to be translated;

computer readable program code configures to cause a computer to assemble a list of the ***metadata*** of said database and their relationship in a pseudo-standardized view of said database;

computer readable program code configured to cause a computer to read skeleton code templates representative of final classes to be produced;

computer readable program code configured to cause a computer to generate source code for the class of the object desired; and

computer readable program code configured to cause a computer to produce said objects desired by enveloping

values assembled in said templates.

7. An article of manufacture comprising:

a computer usable medium having computer readable program code embodied therein configured to communicate elements of a database table between a server computer and a client computer, the computer readable program code in said article of manufacture comprising:

computer readable program code configured to generate a pseudo-object by said server computer, said pseudo-object comprising data of said elements and to generate ***metadata*** of said elements, wherein said ***metadata*** is relationship of said data, wherein said computer readable program code configured to generate an object by said server computer further comprising:

a computer usable medium having computer readable program code embodied therein configured to translate elements of a relational database table into objects desired, the computer readable program code in said article of manufacture comprising:

computer readable program code configured to cause a computer to read said elements of said database table to determine values of said elements and their relationship;

computer readable program code configured to cause a computer to assemble a list of the values of said elements and their relationship to a standardized view of said database table;

computer readable program code configured to cause a computer to access skeleton code templates representative of final objects to be produced;

computer readable program code configured to cause a computer to generate source code for the class of the object desired; and

computer readable program code configured to cause a computer to produce said objects desired by enveloping values assembled in one of said templates;

computer readable program code configured to transmit said pseudo-object and said ***metadata*** from said server computer to said client computer; and

computer readable program code configured to assemble said elements by said client computer from said object and ***metadata*** received.)

5,970,490
(2. The method as claimed in claim 1, wherein the first high level data structure specification and second high level data structure specification comprise:

diverse metatadata, including semantic ***metadata***.

10. The method as claimed in claim 9, wherein the first high level data structure specification and second high level data structure specification comprise: diverse ***metadata,*** including semantic ***metadata***.

At the structural level, the primary characteristics of SGML (Standard Generalized Markup Language), HTML (Hypertext Markup Language), and the new evolving ***XML*** (Extensible Markup Language) have been subsumed, as well as the heterogeneous database structures--including relational and object-oriented models, and to provide extensibility to address multimedia data.

XML is an emerging language called the Extensible Markup Language. It is intended to extend and eventually supersede HTML (Hypertext Markup Language), and to be in the spirit of SGML (Standard Generalized Markup Language) but to be substantially simpler than SGML.

When the SEMDAL language is compared with ***XML*** it can be shown that: 1) ***XML*** capabilities are subsumed, 2) SEMDAL is much more concise, and 3) semantic representational capabilities are provided that go beyond the natural abilities of ***XML***.

First the SEMIDAL representation is presented, followed by the ***XML*** representation given by ***XML*** advocates. The example is that of a bookstore order system, which sells books, records, and coffee. The example comes from ***XML*** literature. The example is reexpressed in the structure SEMDAL and meaningful semantic attribute information has been added--these semantics are not present in the ***XML*** version given in earlier even though that specification is much more verbose)

=

Results for "rule metadata contract xml " from FindArticles (showing 1 - 5 of 5) About

1. **A practical guide to XML.** - 5 pages
   XML might not mark the end of HTML, but if you want to survive in the Web development market, you need to start taking it seriously. Davey Winder explains...

   Internet Magazine, September 01 1999

2. **UML Models e-business.(Technology Information)** - 12 pages
   This article examines Unified Modeling Language (UML) that is used to create models for software systems.

   Software Magazine, April 01 2001 by Paul Harmon

3. **MITAP for biosecurity: a case study. (Articles).** - 13 pages
   MITAP (MITRE text and audio processing) is a prototype system available for monitoring infectious disease outbreaks and other global events. MITAP focuses...

   AI Magazine, December 22 2002 by Laurie Damianos, Jay Ponte, Steve Wohlever, Florence Reeder, David Day, George Wilson, Lynette Hirschman

4. **An eHealth diptych: the impact of privacy regulation on medical error and malpractice litigation.** - 70 pages
   I. INTRODUCTION

   American Journal of Law & Medicine, December 22 2001 by Nicolas T. Terry

5. **The content 100: Econtent magazine's guide to the content companies to watch.** - 34 pages
   Welcome to the Content 100--our attempt at a listing of some of the top content companies to watch. By content we mean digitized text, images, and multimedia...

   Econtent, December 01 2001 by Bill Mickey

Results for "rule meta data contract xml " from FindArticles (showing 1 - 3 of 3) About

1. **UML Models e-business.(Technology Information)** - 12 pages
This article examines Unified Modeling Language (UML) that is used to create models for software systems.

Software Magazine, April 01 2001 by Paul Harmon

2. **Exterprise Extends Its B2B Product Line; Introduces New Solution for Collaborative Sourcing/Contract Management, Platform Upgrade.** - 3 pages
Business Editors & High-Tech Writers

Business Wire, January 22 2001

3. **PR Newswire High Technology Summary (Part 1) Tuesday, August 29, 2000.** - 10 pages
Following is a summary of technology news releases transmitted today by PR Newswire. The full text of these releases is available at the PRN Press Room,...

PR Newswire, August 29 2000

Inventor: MOHAN ARTHUR (US); OBEROI SUPREET (US); (+1)
Applicant: ORACLE INTERNAT CORP (US)
EC:
IPC: G06F17/00 ; G06F7/00
Publication info: **US6574631** - 2003-06-03

4 **Method and apparatus for managing metadata in a database management system** in my patents list
Inventor: MOWER KRISTEN ROI (US); STELLWAGEN JR RICHARD G (US); (+2)
Applicant:
EC:
IPC: G06F17/30
Publication info: **US6535868** - 2003-03-18

5 **Processing drug data** in my patents list
Inventor: GOGOLAK LARA (US); GOGOLAK VICTOR V (US)
Applicant:
EC:
IPC: G06F19/00 ; G01N33/48 ; (+2)
Publication info: **US2002188465** - 2002-12-12

6 **Method of generating a logical data model, physical data model, extraction routines and load routines** in my patents list
Inventor: FINK RONALD (US)
Applicant: NCR CORP (US)
EC:
IPC: G06F17/30
Publication info: **US6490590** - 2002-12-03

7 **System and method for policy based storage provisioning and management** in my patents list
Inventor: COLLINS JIM (US); MEYER RICHARD (US); (+3)
Applicant: CONFLUENCE NETWORKS INC (US)
EC:
IPC: G06F12/00
Publication info: **US2002174306** - 2002-11-21

8 **SYSTEM AND METHOD FOR POLICY BASED STORAGE PROVISIONING AND MANAGEMENT** in my patents list
Inventor: COLLINS JIM; MEYER RICHARD; (+3)
Applicant: CONFLUENCE NETWORKS INC (US)
EC:
IPC: G06F13/00 ; G06F17/60 ; (+1)
Publication info: **WO02065309** - 2002-08-22

9 **Method of generating digital items for electronic commerce activities** in my patents list
Inventor: CHANG DO IM (KR); SONG YOUNG WON (KR)
Applicant: LG ELECTRONICS INC (KR)
EC: G06F17/30E
IPC: G06F17/30 ; G06F17/60

Publication info: **EP1225520** - 2002-07-24

10	**Method and system for manging multiple interpretations for a single agreement in a multilateral environment**	in my patents list
	Inventor: YEHIA RAMZI (US); YIN JOHN (US)	**Applicant:** PARTNERCOMMUNITY INC (US)
	EC:	**IPC:** G06F17/60
	Publication info: **US2002091539** - 2002-07-11	

Compact | Print

RESULT LIST
16 results found in the Worldwide database for:
"metadata AND rule" in the title or abstract
(Results are sorted by date of upload in database)

(+1)

EC: G06N5/02K **IPC:** G06F3/00

Publication info: **US5874955** - 1999-02-23

15 **A SYSTEM FOR TRANSFORMING AND EXCHANGING DATA BETWEEN DISTRIBUTED HETEROGENEOUS COMPUTER SYSTEMS** in my patents list

Inventor: DOYLE MICHAEL (CA); ELLIS DARIN (CA) **Applicant:** JUXTACOMM TECHNOLOGIES INC (CA)

EC: **IPC:** G06F15/16 ; G06F17/30

Publication info: **CA2241767** - 1998-12-27

16 **Interactive rule based system.** in my patents list

Inventor: RABENHORST DAVID ALEN (US); TREINISH LLOYD ALAN (US); (+1) **Applicant:** IBM (US)

EC: G06N5/02K **IPC:** G06F9/44

Publication info: **EP0666534** - 1995-08-09

RESULT LIST
2 results found in the Patent Abstracts of Japan database for:
"metadata AND rule" in the title or abstract
(Results are sorted by date of upload in database)

1 **DTD MANAGEMENT SYSTEM AND METHOD FOR XML, DTD DISTRIBUTION SYSTEM AND METHOD OF XML, AND PROGRAM** in my patents list

Inventor: KOJIMA KAZUTOSHI **Applicant:** HITACHI INFORMATION SYSTEMS LTD

EC: **IPC:**

Publication info: **JP2002245264** - 2002-08-30

2 **MANAGEMENT METHOD FOR DATA BASE CONTAINING PRIVACY INFORMATION AND DEVICE THEREFOR** in my patents list

Inventor: GRIMMER FRANCINE G;CHAPRA JOHN MARK **Applicant:** NCR INTERNATL INC

EC: **IPC:**

Publication info: **JP2001188804** - 2001-07-10

SN.09/840,655

OnlineMay-June, 1998

Turning visual: image search engines on the Web.(The Big Picture)

Author/s: Paula Berinstein

A client desperately needs a picture of a desalination plant, Michael Eisner, the Berlin Philharmonic Orchestra, or clip art relating to the millennium. Visual requests knock you for a loop because your conventional sources can't handle them, but you know the Web must have it--somewhere. However, your attempts lead to one false drop after another.

Never fear. Some creative folks know your dilemma and have devised a solution--Web-based image search engines. Each of these nifty tools works differently to ferret out inline and linked images that match your criteria, so you may want to try several when conducting a search. And, of course, none is perfect, yet.

Of course, none are perfect, yet. The ideal program would:

1) Allow keyword searching of image content, date, and creator

2) Let you search by color, shape, and other formal attributes

3) Search databases internal to a site

4) Display the image as part of your search results

5) Allow you to find the rights-holder

6) Furnish the rights status and terms for licensing

CURRENT FEATURES

You can search by keywords and formal attributes in varying degrees today, Date and creator identification will occur when standards for Web document metadata are implemented.

As for searching internal databases, that will probably never be possible. These remain off-limits to snoopy spiders for good reasons. But don't quote me on that.

An ideal image search engine would display results by showing a thumbnail, the URL of the image, the URL of the site where it resides, and some information about the image. With that data, a person could decide if the image fits the criteria, track down its source site, and locate the image. But so far, Web-based image search engines diverge from this ideal. Some show you only the picture and the URL, without text. Others take you to the site where the image resides and make you hunt for it. Image search engines are no different from general Web search engines in possessing idiosyncrasies. In fact, some of them are general Web search engines, as you will see.

Whether you can find a rights-holder depends partly on your own ingenuity and partly on who's

publishing the image. Several search engines display the image as part of your search results, but fail to take you to the page where it resides (which might at least get you to a Webmaster). In such cases, you can usually work backwards from the picture's URL to find the proper site, since an image is usually located somewhere along the same path as the page that links to it. But sometimes the image resides in a different domain, and then you're stuck in a cul-de-sac. And even when search engines do take you to the source, you face the. sometimes daunting task of determining whether the site's owner and the rights-holder are the same, and arranging for licensing and acquisition.

It would make life easier if sites provided the status of rights and terms for licensing, but lack of access to such information prevents general search engines from finding it. However, the coming Dublin Core standard includes a field for rights management, so you may soon see rights information with search results.
All in all, the tools now available do a pretty good job of satisfying most of our ideal criteria, and for a new medium like the Web, that's not bad!

HOW IMAGE SEARCH ENGINES WORK

We know that images differ from text in dramatic ways. Full text describes its own content--not perfectly--but at least you can search on the words. Images require that someone describe them verbally--no search hooks live in the image itself, unless you're using a facility that recognizes color or shape. So how does a Web search engine identify images and match them to your criteria? With an internal database, search engines can look at captions or fielded data. For inline or embedded images (those that load when a page does) and linked images, where few standards exist, they almost have to finesse the system.

If you were designing an image search engine, you might:

* Look for graphics files. This strategy works to distinguish an image file from other types, but not necessarily to determine its content. It can detect the presence of a displayable graphics file through two HTML tags: IMG SRC and HREF. The IMG SRC tag means "display the following image file," and the HREF tag means "the following is a link." Both often lead to image files. A search engine can tell if the link refers to an image file by examining the file extension. If the file ends in GIF or .JPG, it's an immediately-displayable image.

How does the search engine determine the content of such files? It may read the file names, which are often cryptic and/or abbreviated (DRGN2.GIF). Or it may look in the path for the file name (/public/dragons/ flying.gif). These strategies work up to a point, but depend heavily on descriptive file and path names. Some of the search engines discussed here employ them, and some look further afield for descriptive information.

* Look for a caption. Formal captions for inline and linked images may or may not exist, and even when they do, consistent signals that would allow search engines to recognize them--like the words "Caption" or "Photo" followed by a colon--may be lacking. However, the HTML ALT tag can function as a caption, and some search engines rely on it to describe images. If present, the ALT tag follows the IMG SRC tag. Webmasters use it to describe an image for users who do not have graphics-enabled browsers or who turn their browser's graphics display feature off. The tag is visible to a user as an image is loading, when graphics are disabled, or when viewing source code.

* Look for Web sites whose titles indicate the presence of pictures on a certain subject. This strategy works occasionally but relies on the existence of titles that describe content well, which is

next to impossible. For example, "New Mexico Photo Gallery" tells you that you'll find images of New Mexico at the site, but it doesn't indicate whether you'll find pictures of pueblos, geologic formations native to the state, or the Santa Fe opera house.
* Employ human intervention to seek out and catalog images. This method results in the most accurate system, but its labor-intensiveness limits the number of images that can be processed.

IMAGE SEARCH ENGINES

Two years ago, the Web lacked all but the most rudimentary of image search capabilities. Now you can use the following tools:

* AltaVista (http://www.altavista.digital.com)

* Amazing Picture Machine (http://www.ncrtec.org/picture.htm)

* HotBot (http://www.hotbot.com)

* Image Surfer (http://ipix. yahoo. com)

* Lycos (http://www.lycos.com)

* Web Places Clip Art Searcher (http://www.webplaces.coni/search)

* WebSEEk (http://disney.ctr.columbia. edu/webseek/)

AltaVista

AltaVista, provides a crude image search function based on file name and extension. It looks in the HTML IMG SRC field, which contains the image path and file name. If it finds a .GIF or .JPG extension, it attempts to match the file or directory name to your search term.

For example, a search on rockstars or hendrix would find the picture/ public/images/rockstars/hendrix.jpg. The phrase rock stars would not find this picture because of the space between the terms.

This tool puts the onus on you, the user. You see no thumbnails, and the results may or may not indicate whether the search was on target. While AltaVista can work, it's limited because everything depends on how the Webmaster named the files and directories.

To search for images on AltaVista, type image: followed by your search term, as in image:hendrix.

Amazing Picture Machine

Human intervention is the key to this effective tool from North Central Regional Technology in Education Consortium (NCRTEC), which helps schools develop technology practices. The gurus behind the Amazing Picture Machine select sites rich in pictures, then assign keywords and other descriptive information to each image. Keywords may describe content or represent some associated concept. The term Ginger Rogers is attached to a picture of Fred Astaire, for example. Keywords are contained in a comments field in the source code and aren't visible on the results page--you have to View Source to see them. These keywords may or may not correspond to those

used by the Webmaster at the image's site.

The search interface is simple and self-explanatory. Results display as a short title, caption, whether color or black and white, photograph or "image," file size, file type, and pixel dimensions. To get to the image, click on the title. You'll see the image by itself and, as with some of the other search engines, you will need to backtrack from the URL to get to the context.

HotBot

HotBot uses a strange but workable method. It recognizes the presence of images through file extensions, but it doesn't necessarily match your query term to words associated with the image itself. Rather, it looks for your terms in the title, metatags (invisible descriptors assigned by the Webmaster), and/or content of the site. Essentially, this strategy boils down to a Boolean AND search, rather than the more restrictive adjacency or field searching. Thus, a search on dinosaur might get you a page called "Dinosaur Heresies" that features a GIF file near the top. However, that GIF may or may not represent a dinosaur, since the search boils down to dinosaur AND file of type gif.
Results display as site title and opening text, and lead to the calling page. You may have to hunt for the image once you get there. To search, check the box that says "Include media type image."

Image Surfer

Yahoo!'s Image Surfer comprises a directory as well as a search facility, which means you can browse by hierarchical subject category as well as conduct a keyword or visual search. The Surfer uses Excalibur's Internet Spider to locate and catalog pictures. (Some human intervention is employed with the latter). Webmasters may also submit sites for inclusion.

During a keyword search, Image Surfer looks for your term in the page title, directory or file name, or a link leading to an image file. Just as with text searching, there is no guarantee that the picture will match your keyword. In my testing, tree turned up Whiffle Tree Quilts, and beach found beach resorts, but also Huntington Beach High School.

The search engine finds forms of the word, not just the string you type. For example, my query tree found a picture with "trees" in the path name.

You may also conduct a visual search for items featuring colors, shapes, textures, and for composition similar to your "seed image," but only within the predefined categories, and only wher you are browsing. Keyword search results do not provide seed images for visual searching.

Results display as thumbnails and text. The type of text depends on whether you've searched or browsed. For searches, the page title shows. When browsing, you see not only the page title, but the picture's URL and that of the page on which it resides.

Lycos

Lycos builds on and expands AltaVista's method. Like AltaVista, it looks at file extensions to identify images, then searches the file or directory name to see if there's a match on your query term. However, it also looks for your term in the ALT field. When it displays the search results, it shows both the file name/path and the content of the ALT field so that you get a pretty good idea whether you want to follow the link.

For example, a search on either brontosaurus or dinosaurs would match the following and you'd see both in the results:

Path name: www.paleo.com/images/dinosaurs /bronto.gif ALT="Brontosaurus"

Note that a search on brontosaurus on AltaVista would not find this image because AltaVista doesn't look at the ALT tag.

Once you've followed the link, you'll see the image by itself, sans text except for the URL in the address box of your browser. To find its site, backtrack from the URL.

To begin your search, click on the Pictures link, then fill in the Pictures radio button.

Web Clip Art Search Engine

This interesting meta search engine facilitates your search for clip art. It offers dialog boxes for HotBot, Lycos, Filez, Open Text, Yahoo!, and Euroseek, as well as assorted clip art content and links. You can only search one box or link at a time, however. Tactics include looking for the terms clip art, icons, and backgrounds in site titles, path names, and site content (HotBot) or running a standard Lycos picture search. It also searches FTP sites that contain image files with your query term somewhere in the file name or path, even if your file name is a string rather than the whole term (Filez), and takes you to directories featuring links to backgrounds, clip art, icons, buttons, animated GIFs, and bars and lines (Yahoo!, Open Text, Euroseek). Each search engine looks for image-denoting file extensions, which in the case of Filez may include .TIF, .EPS, and other file types not displayable in Web browsers.
Warning: Finding the rights-holder of an image at an FTP site can be a bear. I do not recommend going this route unless you can't find your image any other way and are willing to tinker.

Results display in various ways, depending on which engine you use. No thumbnails appear, however. Instructions for use appear within each dialog box.

WebSEEk

WebSEEk, an experimental system developed at Columbia University, employs automated agents to detect and catalog visual information. Currently over 650,000 images have been cataloged. The software identifies pictures by looking at file extensions, then indexes them by extracting text from the ALT field, file or directory name, and/or links to the picture. Some terms thus gleaned are mapped to subject classes ("basketball" assigned by a Webmaster becomes part of WebSEEk's "sports" hierarchy, for example). Those that are sufficiently descriptive and nonambiguous make it into the key-term dictionary for free-text searching.

The software also employs pattern recognition and color as well as width, height, type of visual data, etc. to let you search by visual attributes. Most of the time, however, you will probably want to search by keywords.

The major advantage of WebSEEk is its subject classification. You can browse by subject, becoming more and more specific as you work your way through the list of terms. For example, the path sports/basketball/ players/michael_jordan may be browsed at any level. You can also search by keyword, either within a specific hierarchy or across categories. If your query term does not match an assigned subject name, the images are searched directly by comparing the term to

the text related to the images (ALT tag, etc.). You cannot search by phrase.

Results display as thumbnails without text, so that sometimes you can't tell how a particular picture came to be categorized as it was. To get to the actual image, click on the thumbnail. Images display alone, so you'll need to backtrack to the source from the URL.

WebSEEk is a cool tool, subject to the usual drawbacks inherent in any computerized search system. Considering its heavy reliance on automated language processing, WebSEEk does a terrific job.

CONCLUSION

As you might expect, the search engines that incorporate human interaction--Amazing Picture Machine, Image Surfer, and WebSEEk--provide the best results. AltaVista is the most limited because it doesn't look beyond file and directory names. HotBot, Lycos, and Web Clip Art Search Engine fall somewhere in between. All are worth investigating. If you're unfamiliar with these tools give them a whirl. When the time comes, you'll wow your clients, even if you've never done picture research before.

RELATED ARTICLE: Image Search Engines at a Glance

[TABULAR DATA NOT REPRODUCIBLE IN ASCII]

Communications to the author should be addressed to Paula Berinstein, Berinstein Research, P.O. Box 1305, Woodland Hills, CA 91365, 818/865-0523; Fax 818/865-1543; pberinstein@worldnet.att.net.

9/840,655 – 4/23/01

Results of Search in 1976 to present db for:
(((SPEC/rule AND ACLM/metadata) AND (SPEC/contract OR SPEC/agree)) AND SPEC/XML): 3 patents.

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6640145

4. The intelligent media device according to claim 1, wherein said digital memory stores ***metadata*** relating to said received audio and/or video data.
19. The intelligent media device according to claim 1,

wherein:

said packet data communications interface communicates with a local area network to at least one external machine and communicates with a remote human user in a manner suitable for use with a browser, to provide instructions for said intelligent server, said local area network optionally including a wireless communications link;

the at least one external machine comprising one or more selected from the group consisting of a telephony system, an imaging system, a videoconferencing system, a consumer electronic device, a security system, an alarm system, an environmental control system, an automobile; an illumination system, a domestic appliance; a pump, and a flow control;

said digital memory further storing ***metadata*** relating to said received audio and/or video data;

said intelligent server having one or more characteristics selected from the following:

being adaptive to at least one of a human user and/and an external machine,

having a mode of operation for acting autonomously based on an inferred program,

having a mode of operation for receiving feedback from a human user;

being adapted to analyze communications received from a human user for likely error,

being adapted to translate a native external machine interface for presentation to the human user, and

being adapted to receive and execute general purpose computer instructions,

further comprising a digital rights manager for enforcing a set of externally supplied restrictions associated with said received audio and/or video data, and a cryptographic processor for selectively cryptoprocessing audio and/or video data in dependence on said rights manager.

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(3. A method of communicating elements of a database, having a ***metadata,*** between a server computer and a client computer, comprising:

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6. An article of manufacture comprising:

a computer usable medium having computer readable program code embodied therein configured to translate ***metadata*** of a database into objects desired, the computer readable program code in said article of manufacture comprising:

computer readable program code configured to cause a computer to read said ***metadata*** of said database to determine characteristics of said database and their relationship; wherein said computer readable program code further comprises;

computer readable program code configured to generate a pick list based upon an inversion of elements of said database; and

computer readable program code configured to generate a script containing all unique foreign language strings to be translated;

computer readable program code configures to cause a computer to assemble a list of the ***metadata*** of said database and their relationship in a pseudo-standardized view of said database;

computer readable program code configured to cause a computer to read skeleton code templates representative of final classes to be produced;

computer readable program code configured to cause a computer to generate source code for the class of the object desired; and

computer readable program code configured to cause a computer to produce said objects desired by enveloping

values assembled in said templates.

7. An article of manufacture comprising:

a computer usable medium having computer readable program code embodied therein configured to communicate elements of a database table between a server computer and a client computer, the computer readable program code in said article of manufacture comprising:

computer readable program code configured to generate a pseudo-object by said server computer, said pseudo-object comprising data of said elements and to generate ***metadata*** of said elements, wherein said ***metadata*** is relationship of said data, wherein said computer readable program code configured to generate an object by said server computer further comprising:

a computer usable medium having computer readable program code embodied therein configured to translate elements of a relational database table into objects desired, the computer readable program code in said article of manufacture comprising:

computer readable program code configured to cause a computer to read said elements of said database table to determine values of said elements and their relationship;

computer readable program code configured to cause a computer to assemble a list of the values of said elements and their relationship to a standardized view of said database table;

computer readable program code configured to cause a computer to access skeleton code templates representative of final objects to be produced;

computer readable program code configured to cause a computer to generate source code for the class of the object desired; and computer readable program code configured to cause a computer to produce said objects desired by enveloping values assembled in one of said templates;

computer readable program code configured to transmit said pseudo-object and said ***metadata*** from said server computer to said client computer; and computer readable program code configured to assemble said elements by said client computer from said object and ***metadata*** received.)

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(2. The method as claimed in claim 1, wherein the first high level data structure specification and second high level data structure specification comprise:

diverse metatadata, including semantic ***metadata***.

10. The method as claimed in claim 9, wherein the first high level data structure specification and second high level data structure specification comprise: diverse ***metadata,*** including semantic ***metadata***.

At the structural level, the primary characteristics of SGML (Standard Generalized Markup Language), HTML (Hypertext Markup Language), and the new evolving ***XML*** (Extensible Markup Language) have been subsumed, as well as the heterogeneous database structures--including relational and object-oriented models, and to provide extensibility to address multimedia data.

XML is an emerging language called the Extensible Markup Language. It is intended to extend and eventually supersede HTML (Hypertext Markup Language), and to be in the spirit of SGML (Standard Generalized Markup Language) but to be substantially simpler than SGML.

When the SEMDAL language is compared with ***XML*** it can be shown that: 1) ***XML*** capabilities are subsumed, 2) SEMDAL is much more concise, and 3) semantic representational capabilities are provided that go beyond the natural abilities of ***XML***.

First the SEMIDAL representation is presented, followed by the ***XML*** representation given by ***XML*** advocates. The example is that of a bookstore order system, which sells books, records, and coffee. The example comes from ***XML*** literature. The example is reexpressed in the structure SEMDAL and meaningful semantic attribute information has been added--these semantics are not present in the ***XML*** version given in earlier even though that specification is much more verbose)

1. A method for customizable monitoring of one or more contract clauses in a multilateral environment comprising:

retrieving one or more contract clauses from a contract between one or more parties;
defining one or more rules with the one or more contract clauses which have been retrieved, wherein each rule includes at least one condition and one or more actions to perform in response to the condition;

monitoring the clauses with the contract with the rules; and
executing the one or more actions based upon the one or more rules.

2. The method according to claim 1, wherein the rules comprise one or more rules selected from the group of rules with operators including but not limited to ;4 ~< ~; <, =, and =' =15 >.

3. The method according to claim 1, wherein the step of retrieving contract clauses includes the sub-step of:
parsing the contract received into requested XML tag values representing predefined fields.

4. The method according to claim 1, wherein the step of predefining a rule further comprising the step of:
sending a user interface for presentation of a rules wizard including user selectable 25 predefined fields on a first system used by a first partner.

5. The method according to claim 4, further comprising:
prompting at least one of the first partner using the first system for a set of rules to monitor contracts for a specific service identifier.

6. A method for managing multiple interpretations from a single contract in a client-server environment, the method on a server comprising the steps of:
receiving from at least one client information processing system metadata to a contract which has been previously executed by two or more parties, wherein the metadata represents critical items as defined by the at least one client information processing system;
receiving from the at least one client information processing system one or more rules based on the metadata that represents critical items; and
executing at least one of the one or more rules based on the metadata.

7. The method according to claim 6, further comprising the step of:
sending a notification to at least one client information processing system after executing at least one of the one or more rules.

8. The method according to claim 7, wherein in the step of sending a notification includes sending an e-mail notification to at least one client information processing system after executing at least one of the one or more rules.

9. The method according to claim 6, wherein the step of receiving from at least one client information processing system metadata wherein the metadata is selected from a group of contract metadata consisting of terms, conditions, dates, and payments.

10. The method according to claim 6, further comprising the step of:
receiving a user login that permits access only to predetermined areas of the contract upon which only metadata in the predetermined areas of the contract is subsequently received.

11. The method according to claim 10, further comprising the step of:
receiving a user login that permits access only to predetermined areas of the contract upon which rules in the predetermined areas of the contract can be subsequently executed.

12. The method according to claim 6, wherein the step of receiving from at least one client information processing system metadata wherein the metadata is parsed from the contract previously executed by two or more parties and the metadata is delineated by XML tags in the contract itself.

13. The method according to claim 6, wherein the step of receiving from the at least one client information system one or more rules wherein the rules are selected from a menu driven template that is presented on the at least one client information system.

14. A business method for customizable monitoring of one or more contract clauses in a multilateral environment comprising:
retrieving one or more contract clauses from a contract between one or more parties;
defining one or more rules with the one or more contract clauses which have been retrieved, wherein each rule includes at least one condition and one or more actions to perform in response to the condition;
monitoring the clauses with the contract with the rules; and
executing the one or more actions based upon the one or more rules.

15. The method according to claim 14, wherein the rules comprise one or more rules selected from the group of rules with operators including but not limited to and

16. The method according to claim 14, wherein the step of retrieving contract clauses includes the sub-step of:
parsing the contract received into requested XML tag values representing predefined fields.

17. The method according to claim 14, wherein the step of predefining a rule further comprising the step of:
sending a user interface for presentation of a rules wizard including user selectable predefined fields on a first system used by a first partner.

18. The method according to claim 17, further comprising:
prompting at least one of the first partner using the first system for a set of rules to monitor contracts for a specific service identifier.

19. A computer readable medium containing programming instructions for managing multiple interpretations from a single contract in a client-server environment, the programming instructions on a server information processing system comprising the programming instructions comprising:
receiving from at least one client information processing system metadata to a contract which has been previously executed by two or more parties, wherein the metadata represents critical items as defined by the at least one client information processing system;
receiving from the at least one client information processing system one or more rules based on the metadata that represents critical items; and
executing at least one of the one or more rules based on the metadata.

20. The computer readable medium according to claim 19, further comprising the programming instruction of:
sending a notification to at least one client information processing system after executing at least one of the one or more rules.

21. The computer readable medium according to claim 20, wherein in the programming instruction of sending a notification includes sending an e-mail notification to at least one client information processing system after executing at least one of the one or more rules.

22. The computer readable medium according to claim 19, wherein the programming instruction of receiving from at least one client information processing system metadata wherein the metadata is selected from a group of contract metadata consisting of terms, conditions, dates, and payments.

23. The computer readable medium according to claim 19, further comprising the programming instruction of:
receiving a user login that permits access only to predetermined areas of the contract upon which only metadata in the predetermined areas of the contract is subsequently received.

24. The computer readable medium according to claim 23, further comprising the programming instruction of:
receiving a user login that permits access only to predetermined areas of the contract upon which rules in the predetermined areas of the contract can be subsequently executed.

25. The computer readable medium according to claim 19, wherein the programming instruction of receiving from at least one client information processing system metadata wherein the metadata is parsed from the contract previously executed by two or more parties and the metadata is delineated by XML tags in the contract itself.

26. The computer readable medium according to claim 19, wherein the programming instruction of receiving from the at least one client information system one or more rules wherein the rules are selected from a menu driven template that is presented on the at least one client information system.

27. A method for managing multiple interpretations from a single contract in a client-server environment, the method on a client information processing system comprising the steps of:
presenting on a graphical user interface, metadata to a contract which has been previously executed by two or more parties, wherein the metadata represents critical items as defined by the at least one client information processing system;
selecting metadata based on a users preference; sending the metadata to a centralized processing hub;
prompting on the graphical user interface, one or more rules based on the metadata that represents critical items;
sending the one or more rules entered to the centralized processing hub; and receiving a notification when at least one of the rules sent to the processing hub has been executed for the contract.

28. A centralized processing hub for managing contracts in a multilateral environment, comprising:
a channel coupled to a network for providing protocol translation and bi-directional communication between a plurality of partner systems, wherein at least one contract has been previously executed by two or more trading partners via the partner systems; a parser coupled to the channel, which parses the previously executed contract received into one or more XML tag values representing critical items;
means for generating a graphical user interface on the at least one of the plurality of partner systems to receive a trading partner's selection of metadata to the contract and at least one customizable rule based on the metadata; a data and rules analysis engine which executes the rules received from the trading partner's selection; and
an action processor, which sends a least one notification to the partner system being used by the trading partner whose customizable rule definitions are being managed.

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METHOD AND SYSTEM FOR MANAGING MUTLIPLE INTERPRETATIONS FOR A SINGLE AGREEMENT IN A MULTILATERAL ENVIRONMENT

ABSTRACT OF THE INVENTION

A method and system for monitoring contracts in a multilateral environment. The multilateral environment includes two or more trading partners trading goods and services. The system is based on hub and spoke architecture. The hub presents to each of the partners using a partner system a user interface for receiving one or more contract clauses, and defining and extracting its own version of metadata based on and from the contract clauses. A graphical user interface presented on the partner system permits one or more customizable rules to be defined, wherein each rule includes at least one condition and one or more actions to perform in response to the condition. The system monitors the one or more contract clauses with the rules. The system performs one or more predefined actions when a contract clause satisfies the requirement of the customizable rules.